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## NEW UNIONIDÆ FROM ALABAMA.

BY L. S. FRIERSON.

Quadrula archeri n. sp. Plate I, figs. 1, 2.

Shell small, thin, lenticular, somewhat quadrate, smooth. Anterior margin rounded, basal margin slightly curved, dorsal margin somewhat bent midway, posterior margin rounded or bluntly pointed, umbones low and flattened. Sides compressed, raised slightly at the posterior angle, which is nearly obsolete; posterior slope wide, and somewhat elevated; epidermis smooth, light brown, sometimes inclining to orange, two or three concentric bands of green or black mark the earlier lines of growth.

Teeth of the left valve double, anterior cardinal high, thin and wedge-shaped, the posterior cardinal triangular, low and small, laterals thin, rather short and nearly straight.

In the right valve the cardinals are divided by a deep cleft, extending nearly to the bottom of the anterior adductor scar, the posterior tooth being much the smaller. The dorsal plate is quite wide for so small a shell. The shell cavity is quite capacious; the beak cavities deep and compressed. Nacre white, with brown splotches, and very iridescent. The nacre is probably also salmon-colored in some individuals. The pallial line in the specimens before me is nearly imperceptible in the posterior part of shell, where the nacre is very thin. One specimen shows in the upper part of the shell cavity, 20 or 30 almost microscopic muscle-scars extending from the beak cavities half way to the pallial line. Long. 34, alt. 28, diam. 14 mm. Habitat: Tallapoosa River, at Tallassee, Ala.

This shell is not closely allied to any shell with which I am acquainted. On the one hand it resembles some of the *Pleurobemas* of the group typified by *P. fassinans*, Lea, and on the other hand it bears some resemblance to a young and thin *Q. aurea*, Lea. In the concentric coloring of the lines of growth, it reminds one of *Q. asperata*, Lea. Its deep and compressed beak cavities place it in the genus *Quadrula*, while its resemblances to the latter two species is too slight to cause any error in their direction. Four specimens were found in the Tallapoosa River, Ala., by Mr. A. A. Hinkley, who has kindly allowed me to retain the specimen figured.

## Quadrula rubidula n. sp. Plate I, figs. 3. 4.

Shell small, heavy, somewhat triangular; base emarginate, dorsum arched, posterior angle biangulate; ligament elevated, light red. Beaks not very high, umbones inflated, sides flattened, epidermis brown, rough, obsoletely rayed, and showing traces of a greenish tint.

Cardinals stout, short, rough, inclined to be double in both valves; laterals rather short, heavy, rough, and slightly curved; cavity of shell very irregular, excavated from beak to posterior margin; beak cavity deep and compressed, nacre white, sometimes pinkish, not very iridescent. Long. 36, alt. 32, diam. 22 mm.

The shell is close to *Q. rubida*, Lea, and some forms resemble some of the depauperated specimens of *Q. trigona*, Lea. From either of these species it may be differentiated by its small size, and by the biangulated posterior angle. Some 30 or 40 specimens from the Mulberry River; 20 or 30 from the Black Warrior, and a single specimen from the North River, Alabama, show a remarkable constancy in size and other characters. Examples may be seen in the cabinets of most of the collectors of Unionidæ in America, contributed by Mr. A. A. Hinkley, of Dubois, Illinois.

### TWO UNDESCRIBED CALIFORNIAN SHELLS.

### BY WILLIAM HEALEY DALL.

Murex (Phyllonotus) santarosana n. sp.

Shell small for the subgenus, with about six whorls, each bearing from five to seven strong, low, reflexed varices, with a prominent,